

**REMARKS**

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. Claim Status

Claims 1-8 are pending and were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,316,998 to Oikawa, et al. ("Oikawa") or Japanese Patent Publication No. 04-154312 to Ogawa, et al. ("Ogawa") taken with U.S. Patent Application No. 2002/0011612 to Hieda ("Hieda") and European Patent No. EP 1347506 to Sugawa, et al. ("Sugawa"). [3/29/07 Office Action, p. 2].

By this paper, claims 1 and 6 are amended and claims 7-8 are canceled without prejudice or disclaimer. Applicants reserve the right to pursue canceled claims in a continuing application. Claims 1 and 6 have been amended to include the limitation of canceled claim 7. Claim 1 is further amended to include the limitation of canceled claim 8 and recite, *inter alia*, a "differential amplification circuit including a p-channel MIS field-effect transistor and an n-channel MIS field-effect transistor."

No new matter will be introduced into this application by entry of these amendments. Entry is respectfully requested.

B. Claims 1-8 are Patentably Distinct from the Cited References

Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection of claims 1-8. Oikawa, Ogawa, Hieda, and Sugawa, whether taken singly or in combination, do not teach, disclose or suggest each and every element of these claims. Accordingly, a rejection for obviousness is improper.

First, in numerous instances, the Office Action cites, without support, alleged "motivations" for certain combinations or modifications. However, it is respectfully noted that such motivation must have been present in the prior art. Motivations that arise from the inventor's disclosure or later acknowledgement of others cannot be used in a rejection. Since the rejection does not cite anywhere in the prior art where such motivation comes from, it must be presumed that the alleged motivation comes from somewhere other than the prior art and use of that motivation is improper and prejudicial. For this reason alone, the obviousness rejections should be withdrawn. Notwithstanding the problems with the recited "motivation," the obviousness rejections are overcome and traversed on the merits as follows.

The Office Action contends that both Oikawa and Ogawa disclose a DC amplifier comprising a "differential amplification circuit including a MIS field-effect transistor" as recited in Applicants' pending claim 1. However, as recognized and asserted by the Office Action, neither Oikawa or Ogawa teach a MIS field-effect transistor (MISFET) comprised of a three-dimensional structure having "a first crystal surface as a primary surface" and a "second crystal surface as a side surface" wherein hydrogen termination "on the silicon surface is removed in plasma atmosphere." [3/29/07 Office Action, p. 2].

In attempting to remedy this deficiency, the Office Action relies on the introduction of Hieda and Sugawa. Applicants' hydrogen removal process is rejected by the Office Action as being subject to a product-by-process limitation and, hence, is not patentable. [3/29/07 Office Action, p. 2]. Moreover, the Office Action contends that, in light of Sugawa, such a process would have been conventional and obvious. [3/29/07 Office Action, p. 3]. The Office Action further contends that Hieda discloses a MISFET comprising a projection portion formed by a

silicon substrate having a first and second crystal surface which serve as primary and side surfaces, respectively. [3/29/07 Office Action, p. 2].

Applicants respectively disagree with the Office Action and assert that independent claims 1 and 6, as amended, would not have been obvious to one of ordinary skill in the art at the time of the invention. In particular, the cited references do not teach, disclose, or suggest the constitution wherein the gate widths of a three-dimensional transistor are set such that the current drive capability of the p-channel MISFET is substantially equal to the current drive capability of the n-channel MISFET. In fact, Oikawa, Ogawa, Hieda, and Sugawa do not describe the above features, they do not disclose any structure for realizing this objective, nor do they realize the advantage of doing so. Furthermore, as discussed above, there was no apparent motivation to conceptualize a transistor having a three-dimensional structure wherein the gate widths of a top and side surface are adjusted such that the current drive capability of the n- and p-channel MISFETS are substantially equal.

In rejecting claim 7, the Office Action indicates, *inter alia*, that "[t]he setting of desired gate widths as in claim 7 so the current drives can be substantially equal would have been obvious as it does not impart any structural differences ..." [3/29/07 Office Action, p. 4-5]. In response, Applicants note that the recitations in amended claims 1 and 6 such as "gate widths of a top surface and a side surface of the p-channel MIS field-effect transistor and the n-channel MIS field-effect transistor are set such that ..." clearly define the structural differences of the present invention because the gate width ratio between the top surface and side surface will determine the capability of the MISFET (e.g., current drive capability).

Thus, for at least the reasons discussed above, claims 1 and 6 are believed patentable over Oikawa, Ogawa, Hieda, and Sugawa, whether taken alone or in combination, and a rejection for

obviousness is improper. Dependent claims 2-5 are also believed to define patentable subject matter for at least similar reasons. Claims 7-8 have been canceled, thereby rendering the Section 103 rejection as moot. Accordingly, reconsideration and withdrawal of the rejections of claims 1-8 under 35 U.S.C. § 103(a) is respectfully requested.

Applicants have chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Applicants have not specifically addressed the rejections of the dependent claims. Applicants respectfully submit that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicants, however, reserve the right to address such rejections of the dependent claims in the future as appropriate.

### CONCLUSION

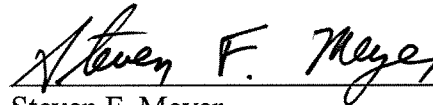
For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 5000-5296.

Respectfully submitted,  
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